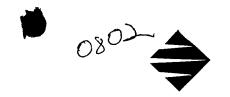
415/957-0110



ICF TECHNOLOGY INCORPORATED

SFUND RECORDS CTR 2089501

MEMORANDUM

| SUBMITTED TO: | Rachel Loftin, U.S. Environmental Protection Agency | | |
|--------------------------------------|---|--|--|
| PREPARED BY: | Gary Jensen, ICF Technology, Incorporated | | |
| THROUGH: | Matthew Williams, Ecology and Environment, Incorporated | | |
| DATE: | July 24, 1991 | | |
| SUBJECT: | Completed Work | | |
| СОРҮ: | Marcia Brooks, Ecology and Environment, Incorporated | | |
| | | | |
| This list is for the at | tached completed: | | |
| PA | PA Review SSI LSI | | |
| Other EPI PA | | | |
| Site Name: | Whittier Plating Company, Inc. | | |
| EPA ID#: | CAD008495129 (220) | | |
| City, County: | Santa Fe Springs, Los Angeles County | | |
| State Recommendat (for Reviews only) | ion: | | |
| | EOD EDA LICE ON V | | |
| CERCLIS Lead: | DA /1741 COMPLETE / " 10" 8/9/91 | | |
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ICF TECHNOLOGY INCORPORATED

ENVIRONMENTAL PRIORITIES INITIATIVE PRELIMINARY ASSESSMENT

Purpose: RCRA Preliminary Assessment

Site: Whittier Plating Company, Inc.

11642 East Pike St.

Santa Fe Springs, California

Los Angeles County

Site EPA ID Number: CAD008495129

TDD Number: F9-9101-012

Program Account Number: FCA1678RAA

FIT Investigators: Gary Jensen, ICF Technology, Incorporated

Tim Swillinger, ICF Technology, Incorporated

Date of Inspection: March 12, 1991

Report Prepared By: Gary Jensen, ICF Technology, Incorporated

Report Date: July 24, 1991

FIT Review/Concurrence: $\int ame = \frac{7}{31/91}$

Submitted To:

Rachel Loftin, Site Assessment Manager,
EPA Region IX

1. INTRODUCTION

As part of the its Environmental Priorities Initiative (EPI) program, the U.S. Environmental Protection Agency (EPA) has requested ICF Technology, Inc.'s Field Investigation Team (FIT), subcontractors to Ecology and Environment, Inc., to conduct a Preliminary Assessment (PA) of Whittier Plating Company, Inc., located at 11642 East Pike St. Santa Fe Springs, California.

The EPI program integrates the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the 1984 Hazardous and Solid Waste Amendments (HSWA), with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), in order to set priorities for cleanup of the most environmentally significant sites first. The PA is conducted using CERCLA Hazard Ranking System (HRS) criteria to determine the site's eligibility for inclusion on the National Priorities List and, thus, assist in prioritizing facilities for the RCRA Program.

2. SITE DESCRIPTION

2.1 Site Location and Owner/Operator History

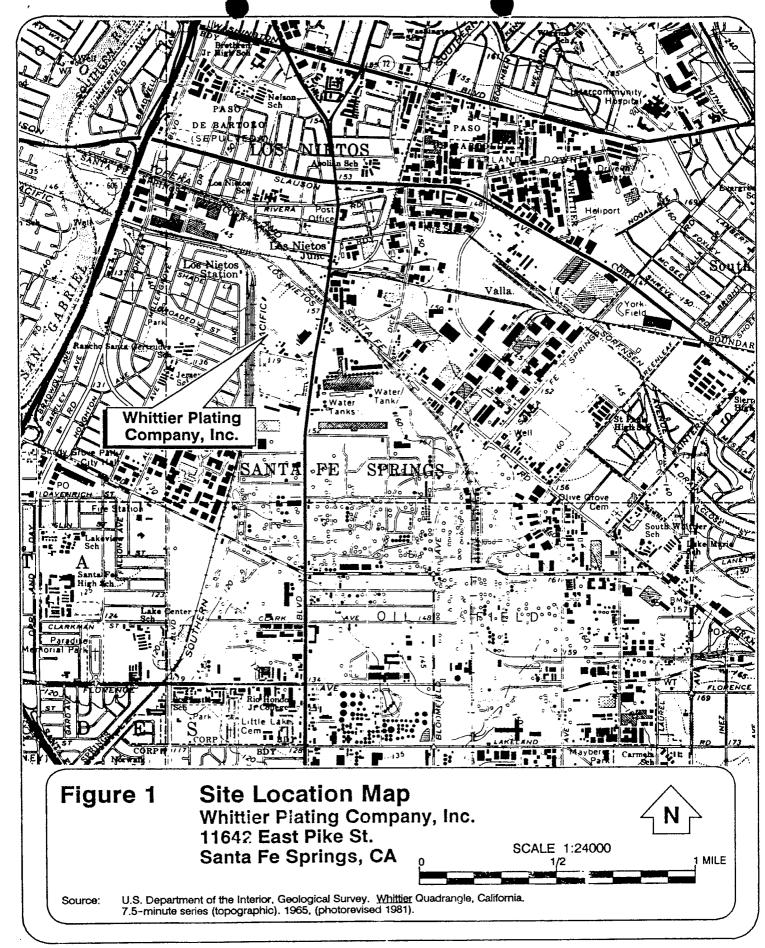
The Whittier Plating Company, Inc., (WP) site is located at 11642 East Pike St., Santa Fe Springs, California (T. 2S., R. 11W., sec. 32, San Bernardino baseline and meridian; lat. 33° 55+ 18 \, long. 118° 4+ 27 \, (1,2). WP is owned by Mr. Simon Molino who is also the president of WP (2). Reportedly WP is the original business at the location which first began operations in 1964. Prior to 1964, the land had been used as farm land (2). The site is located in an industrial section of Santa Fe Springs and is bordered by Crow Company to the north, Pike Street to the east, and Forging & Die to the south (2). A site location map is presented as Figure 1.

The site covers approximately 1.6 acres (3). On-site facilities consist of a warehouse, an automobile bumper storage yard, and several sheds. Administrative offices, additional bumper storage areas, and the plating area are housed in the warehouse (2). A facility layout map is presented as Figure 2.

2.2 Facility Process/Waste Management

WP straightens, cleans, and rechromes automobile bumpers and wheels (2). WP receives its bumpers from autobody shops which have contracts with WP to perform "bumper work". The straightening and some minor hand filing takes place in a shed located behind the warehouse. The bumper is then ground with a grinder in the rear section of the warehouse to smooth out any kinks left in the bumper (2). Some metal dust is generated in this area, but all employees who work in this area are reportedly required to wear face masks to prevent dust inhalation and small metal particles from entering workers' eyes (2). The air in the grinder area is passed through an air filter to remove dust particles. Residual dust which settles on the floor at WP is reportedly swept up daily at the close of business and placed in barrels. The barrels are hauled off site by Norwalk Drum (EPA ID# CAD981422140) 3 to 4 times per year (2).

Excess chrome is removed from bumpers by the application of a hydrochloric acid solution (2). Bumpers are then rinsed and polished with a hand held electric polisher to obtain a





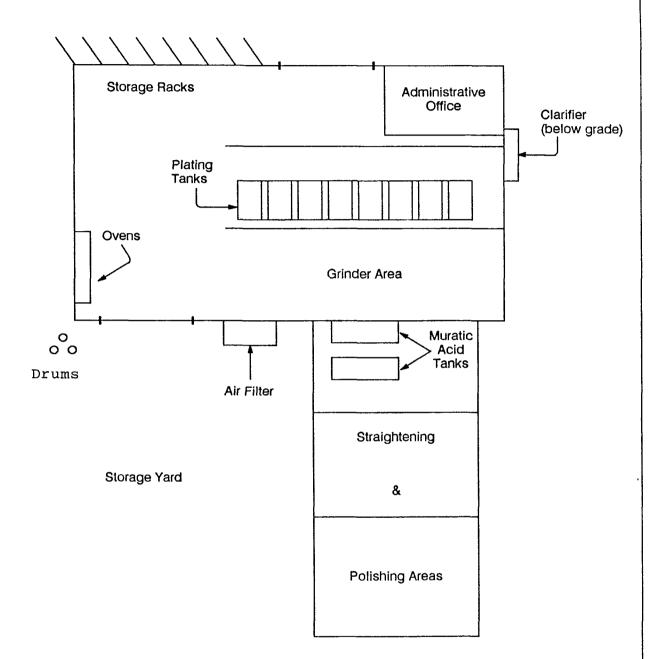


Figure 2 Site Layout Map
Whittier Plating Company, Inc. 11642 East Pike St. Santa Fe Springs, CA



NOT TO SCALE

Source:

Jensen, Gary, and Swillinger, Tim, ICF Technology, Inc. Site Reconnaissance Interview and Observations Report. March 12, 1991.

smooth base for the chroming process. Metal dust is also generated from this process and employees are required to wear masks when polishing (2).

Bumpers are then taken to the plating room where Cal Strip (a detergent) is used to clean and degrease them. Following this process, bumpers are hoisted up and lowered mechanically into a series of tanks beginning with a soap tank containing an industrial soap solution (5% sodium hydroxide). Upon removal from this tank, the bumpers are wiped down by hand with a plater swab (similar to a mop) and the bumpers are then water rinsed in a tank (2).

Bumpers are then placed in a sour dip (5% acid) solution tank. For the last 10 years, WP has formed the solution by combining acid salts with water. Prior to that time, WP had formed the solution by combining water and sulfuric acid. After treatment with the sour dip, bumpers are rinsed with water (2).

Bumpers are then submerged in a nickel plating solution for 40 to 45 minutes. A high amperage, low voltage current is run through the bumper in order to activate the nickel in solution. By this process bumpers are plated with a nickel layer (2). Prior to November 1980, WP used a copper-cyanide solution instead of nickel in its electroplating process (35). Following nickel coating, the bumpers are hoisted out of the plating tank and rinsed with water just above the plating tank so that the rinsewater falls back into the plating tank. The bumpers are rinsed a second time with clear water before they are lowered into the chrome solution tank for approximately 1.5 minutes. After the chrome plating process, the bumpers are rinsed in the same manner as described above and are then taken off-line and placed on a rack, ready for delivery (2).

Solutions in the plating tanks reportedly are not drained (2,35). Water and metals are added to the plating tanks when necessary. Rinsewaters generated during the rinsing processes are piped to a below-grade clarifier where the metals are removed from the rinsewaters before discharge to the public sewer system under permit (2,10). Approximately 11,000 to 12,000 gallons of rinsewater is put through the clarifier each day (2). Sludge which collects in the clarifier, (approximately 40 gallons per week) is cleaned out once every three weeks. These sludges are collected in containers and placed in drier ovens where they are warmed in order to speed the evaporation of the water from the sludges. The sludge dries into a cake which is put into barrels and hauled off-site by Norwalk Drum (2). These ovens operate under South Coast Air Quality Management District (SCAQMD) air discharge permits (9).

WP purchases approximately 2,000 pounds of nickel and 500 to 600 pounds of chromium annually. The nickel is delivered in 550 pound cans and the chromium in 100 pound cans (2).

3. REGULATORY INVOLVEMENT

3.1 U.S. Environmental Protection Agency (EPA)

On January 19, 1981, WP filed a Part A RCRA application for storage and treatment of wastes at the facility (3,4). On April 1, 1981, WP was inspected by EPA. No violations were reported and no spills or releases of hazardous substances were noted by during that investigation (35). Currently, WP is listed on the May 3, 1990 RCRA Database as a generator and TSDF facility; however, WP was identified by EPA as a generator only following a facility inspection on May 5, 1987 (5). On September 24, 1987, DHS requested that EPA remove WP from the EPA RCRA database because WP had been identified as a generator only (36). There has been no apparent action on the DHS request.

3.2 California Department of Health Services (DHS)

In an inspection conducted by DHS on October 20, 1988 it was noted that WP should be reclassified as a generator only (6). However, DHS also noted that WP was in violation of its permit because clarifier sludge was stored on site for a period greater than 90 days. Some administrative violations were noted during the 1988 inspection, however no spills or releases of hazardous substances were noted by DHS (6). No ISD has been issued to WP, and according to DHS records, there has been no state action at the site (38).

3.3 Regional Water Quality Control Board (RWQCB)

RWQCB has not been involved with the site (8).

3.4 SCAOMD

According to SCAQMD, Whittier Plating has not violated its air discharge permits (9).

3.5 Other Agency Involvement

According to the Los Angeles County Sanitation District (LACSD) samples the clarifier effluent once every 3 months and also conducts random sampling of the clarifier contents (2). LACSD has noted a few discharge violations between 1983 and 1989, when nickel and chrome were discharged to the public sewer system at levels higher that allowed by LACSD. No discharge violations at WP have been noted by LACSD since 1989 (10,11).

4. DESCRIPTION OF INDIVIDUAL SOLID WASTE MANAGEMENT UNITS

Distinct Solid Waste management Units (SWMUs) have been identified to evaluate potential on-site sources of releases to air, surface water, groundwater, and soil. A SWMU is defined as any discernible waste management unit at a facility from which hazardous constituents might migrate, irrespective of whether the unit was intended for the management of solid and/or hazardous waste. As a result of this Preliminary Assessment, FIT has identified two SWMUs at the site. It appears that these units are RCRA-regulated. Additional SWMUs may exist.

4.1 Clarifier

Unit Description:

The 1,500 gallon, below-grade, three-stage clarifier treats effluent from the plating processes through elementary neutralization and flocculation. The effluent is then discharged to the sanitary sewer under permit by LACSD (2).

Date of Start-up:

The clarifier was installed when WP began operations in 1964 (2).

Date of Closure:

The clarifier is currently active (2).

Waste Managed:

The clarifier treats rinsates containing nickel, chrome, and hydrochloric acid from the plating processes (2).

Release Controls:

The clarifier is located in a below-grade concrete pit and is covered with a steel lid (2).

History of Releases:

According to the facility operator, there have not been any releases from the clarifier to the surrounding environment (2). On a few occasions, effluent samples collected from the clarifier have been found to contain levels of nickel and chrome which exceeded the discharge limits set by the LACSD (10,11). The most recent discharge violation occurred on January 29, 1989 (11). Reportedly, the soils surrounding the clarifier have not been sampled (2).

4.2 Drum Storage Area

Unit Description:

The drum storage area is located near the rear of the warehouse. The exact location of this area is not well defined (2). According to a 1987 EPA inspection report, the facility stored wastes for periods exceeding 90 days (5).

Date of Start-up:

Drums containing metal dust and dried clarifier sludge cakes have been stored in this area since the facility began operations in 1964 (2).

Date of Closure:

The drum storage area is currently active (2).

Waste Managed:

Dried sludges collected from the clarifier and virgin Cal Strip are stored in drums in the storage area (2).

Release Controls:

The drums are located on concrete but the area is not bermed. There is no overhead protection for the drums and dried sludge is kept in containers without lids (2).

History of Releases:

There is no available information which documents that a spill or release of hazardous substances has occurred in this area (2). However there has not been any sampling conducted in this area (2).

5. HRS FACTORS

The Hazard Ranking System (HRS) is a scoring system used to assess the relative threat associated with actual or potential releases of hazardous substances from sites. It is the principle mechanism EPA uses to place sites on the National Priorities List (NPL). FIT has evaluated the following HRS factors relative to this site.

5.1 Waste Type and Quantity

The majority of wastes generated by WP consists of process rinsates (approximately 13,000 gallons per day) which are treated through an on-site, 15,000 gallon, three-stage clarifier installed in 1964 (2).

Dried sludge collected from the sump and metal dusts generated from grinding operations are stored in drums in an area directly behind the warehouse (see Figure 2) (2). During FIT's visit to the site, three 55-gallon drums of metal dust and dried sludges were observed in the hazardous waste storage area (2). According to a disposal manifest, in February 1991 approximately 10 cubic yards of metal dusts, dried sludge, and soil were hauled off-site to the U.S. Ecology disposal facility in Beatty, Nevada (39). FIT has been unable to obtain information regarding the source of the soil from facility representatives.

5.2 Groundwater

The WP site is located in the Central Basin of the Coastal Plain of Los Angeles County (1). Sediments of the Recent Series and the Lakewood and San Pedro formations of the Pleistocene series have been identified within the Central Basin and are known to be present in the area beneath the WP site (12).

Groundwater occurs in Recent and Pleistocene aquifers throughout the Central Basin and some fresh water occurs in the underlying Pleistocene sediments. The shallow semiperched aquifer of both Recent and late Pleistocene age is unconfined (12). The water in the underlying aquifers (Gage, Lynwood, and Silverado) is confined throughout most of the basin. Groundwater recharge occurs in the eastern portion of the Central Basin and groundwater flow in the basin is to the southwest (12).

Several potable aquifers underlie the WP site. Depth to the shallowest potable groundwater aquifer, the Gasper Aquifer, in the vicinity of the site is approximately 75 feet below ground surface (bgs) (12,22). This aquifer is not interconnected with underlying aquifers in the area and is separated from the ground surface by a 13-foot thick layer of sand and gravel and a 62-foot thick layer of clay (12,26). Net precipitation in the vicinity of the site is approximately 2.77 inches (13).

Groundwater is a source of drinking water for residents in the Santa Fe Springs area. Most drinking water in the area is supplied by several water purveyors. The source of drinking water is a mixture of imported surface waters from the Colorado River and State of California Water Project (SCWP), and groundwater from wells operated by the various water purveyors (16).

Thirteen municipal purveyors operate a total of 59 active municipal groundwater wells located within 4 miles of the site. These water purveyors serve a combined total population of 451,824 (16,17,18,19,20,21,22,23,24,25,26,27,28,29,30). The closest well (City of Santa Fe Springs well #1) is located approximately 0.7 miles northeast of the site (26). Water from this well is drawn from a depth beginning at 273 feet bgs from the Lynwood aquifer (12,26). The number of wells, percentage of total drinking water obtained from groundwater sources, and the population served by each purveyor in the area is presented in Appendix C.

There has been no sampling of groundwater or soils at the WP facility (2). No chemical spills or sources of uncontained hazardous wastes have been reported in available file information. The potential for a release of hazardous substances from the site to the groundwater appears to be low due to the depth to potable groundwater and the presence of an intervening low permeability clay layer in the unsaturated zone.

5.3 Surface Water

The nearest downslope surface water body is the San Gabriel River which is located approximately 3,690 feet west of the site (1). The river flows into the Pacific Ocean

approximately 16 miles downstream from the probable point of hazardous substance entry from the site (1,14,15). The San Gabriel River is not used for drinking water, industrial or irrigation purposes; however, the habitats of 2 known state or federally designated endangered species, the California least tern (Sterna antillarum browni) and the Beldings savannah sparrow (Passerculus sandwichensis beldingi), are located within 15 miles downstream of the site (31,37). The site is located in a 500-year floodplain and the 2-year, 24-hour rainfall in the area is approximately 3 inches (32,33).

A release of hazardous substances from the site to the surface water has not been documented. The potential for a release of hazardous substances to the nearby surface waters appears to be low because the site is entirely paved and is located in a 500-year floodplain. Additionally, the nearby surface water uses are limited.

5.4 Soil Exposure

WP is located in an industrial area of Santa Fe Springs and employs approximately 20 people (2,3). Approximately 12,972 people live within 1 mile of the site (34). There is no known resident population at the entirely paved site. No soil sampling has been conducted at the site. There is no file information to indicate that a chemical spill occurred at the site or that a source of uncontained hazardous waste is present at the site. Access to the facility is controlled by the presence of a chain-link fence (2). For these reasons, the potential for an on-site soil exposure incident appears to be low at this time.

5.5 Air

There is no file documentation to indicate that there has been a release of hazardous substances from WP to the air during its period of operation. There are no known threatened or endangered species within 4 miles of the site (31). As indicated below, approximately 306,553 people live within 4 miles of the site (34):

| Distance From Site | Population |
|--------------------|------------|
| On-site | 20 |
| 0 - 1/4 mile | 1,071 |
| 1/4 - 1/2 mile | 4,282 |
| 1/2 - 1 mile | 7,619 |
| 1 - 2 miles | 53,727 |
| 2 - 3 miles | , 108,557 |
| 3 - 4 miles | 131,277 |
| Total | 306,553 |

The potential for a release to the air appears to exist at this time because dried sludge is kept in containers without lids at the site. However, the amount of uncovered sludge appears to be small.

6. SUMMARY OF FIT INVESTIGATIVE ACTIVITIES

6.1 Agencies Contacted

In the effort to obtain site specific information, FIT contacted the California Regional Water Quality Control Board, the California Department of Health Services, the Los Angeles County Sanitation District, and the South Coast Air Quality Management District.

6.2 Reconnaissance Observations

On March 12, 1991 FIT conducted a site interview and reconnaissance visit at the WP facility with Mr. Simon Molino, President of Whittier Plating. Following the interview, FIT was escorted through the facility by Mr. Molino, where FIT proceeded to assess current on-site conditions and photodocument observations. A complete description of the interview and on-site reconnaissance is provided in Appendix A under the Site Reconnaissance and Observations Report (2). Photographs taken during the site visit are presented in Appendix B.

7. EMERGENCY RESPONSE CONSIDERATIONS

The National Contingency Plan [40 CFR 300.415 (b)(2)] authorizes the Environmental Protection Agency to consider emergency response actions at those sites which pose an imminent threat to human health or the environment. Due to the lack of a documented or observable spill or release of hazardous substances at the site and restricted site access, referral of this site to EPA's Emergency Response Section does not appear to be necessary at this time.

8. SUMMARY OF HRS CONSIDERATIONS

Whittier Plating Company (WP) is located at 11642 East Pike St., in an industrial area of Santa Fe Springs, California. WP rechromes automobile bumpers and also rechromes automobile wheels at the site. Bumpers are coated by dipping them into various solutions contained in process tanks located in the plating room. The approximately 1.6-acre site is currently active and is entirely fenced and paved.

Rinsates from the plating process are piped to a below-grade clarifier. Treatment of the rinsates involves elementary neutralization and flocculation to precipitate metals out of solution. After treatment, the water is discharged to the sewer system under permit by the

Los Angeles County Sanitation District (LACSD). Metal-containing sludges from the treatment process are dewatered and transported off site under manifest for disposal. The effluent discharged to the sewer is monitored by LACSD both monthly and on a random basis. In February 1989, LACSD issued a discharge violation to WP for exceeding effluent discharge levels for nickel and chrome to the sanintary sewer. Preceding and subsequent sample analysis of the facility's treated effluent indicated that the levels of metals were below the discharge limits.

Currently, the site is listed as a TSDF facility on the RCRA database; however DHS has requested the site status be changed to generator only.

Within a 4 mile radius of the WP site, 13 water purveyors combine to serve drinking water to approximately 451,824 people. There are approximately 59 municipal supply wells located within 4 miles of the site. No chemical spills or observable sources of uncontained hazardous wastes at the site have been reported in available file information. The potential for a release of hazardous substances from the site to the potable groundwater appears to be low due to the depth to potable groundwater and the presence of intervening low permeability clay layers in the unsaturated zone.

The nearest downslope surface water body to WP is the San Gabriel River which is not used for fishing or drinking water purposes. The creek enters the Pacific Ocean 16 miles from WP. A release of hazardous substances from the site to the surface water has not been documented. The potential for a release of hazardous substances to the nearby surface waters appears to be low because the site is entirely paved and is located in a 500-year floodplain. Additionally, nearby surface water uses are limited.

WP is located in a commercial/industrial area of Santa Fe Springs and employs approximately 20 people. Approximately 12,972 people live within 1 mile of the site. No surface soil contamination has been documented at the site. Access to the facility is controlled by the presence of a chain-link fence and the facility is completely paved. For these reasons, the potential for a soil exposure incident appears to be low at this time.

Approximately 306,553 people live within 4 miles of the site and no state or federally designated threatened or endangered species are known to exist within 4 miles of the site. The potential for a release to the air appears to exist at this time because dried sludge is kept in uncovered containers. However, the amount of uncovered sludge appears to be small.

The significant HRS factors associated with the site are as follows:

- small apparent quantity of on-site wastes;
- low likelihood of a release to potable groundwater due to the depth to potable groundwater and the presence of an intervening clay layer between the ground surface and the potable aquifer;

• limited surface water uses in the area;

• low potential for a soil exposure incident or for an air release.

9. EPA RECOMMENDATION

| , | <u>Initial</u> | <u>Date</u> |
|---|----------------|-------------|
| No Further Remedial Action Planned (CERCLA) | | |
| Higher Priority SSI (CERCLA) | | |
| Lower Priority SSI (CERCLA) | | |
| Defer to Other Authority (e.g., RCRA, TSCA, NRC) | 3m_1 | 8/9/91 |

Notes:

10. REFERENCES

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- 2. Jensen, Gary, and Swillinger, Tim, ICF Technology Inc. Site Reconnaissance Interview and Observations Report. March 12, 1991.
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- 6. California Department of Health Services. TSD Facility Inspection Report, Whittier Plating Company. October 20, 1988.
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- 9. Jensen, Gary, ICF Technology, Inc., and Ketcham, Ron, South Coast Air Quality Management District. Telephone conversation. February 13, 1991.
- 10. Jensen, Gary, ICF Technology, Inc., and Weinke, Rob, Los Angeles County Sanitation District. Telephone conversation. February 6, 1991.
- 11. Los Angeles County Sanitation District. Discharge Violation Notice. January 29, 1989.
- 12. California Department of Water Resources, Southern District. <u>Bulletin No. 104:</u> <u>Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County</u>. June 1961.
- 13. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Environmental Satellite Data and Information Service, National Climatic Data Center. Comparative Climatic Data for the United States Through 1985. Nashville, Tennessee.
- 14. U.S. Department of the Interior, Geological Survey. <u>South Gate</u> Quadrangle, California. 7.5-minute series (topographic). 1965 (photorevised 1981).
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- 17. Peters, Belinda, ICF Technology, Inc., and Hillman, Randy, City of Norwalk Water Department. Telephone conversation. April 10, 1991.
- 18. Peters, Belinda, ICF Technology, Inc., and Lynch, Gary, Park Water Company. Telephone conversation. April 10, 1991.
- 19. Jensen, Gary, ICF Technology, Inc., and Shafer, Gene, Suburban Water Systems. Telephone conversation. April 10, 1991.
- 20. Peters, Belinda, ICF Technology, Inc., and McClould, Bob, San Gabriel Valley Water Company. Telephone conversation. April 10, 1991.
- 21. Peters, Belinda, ICF Technology, Inc., and Draper, Gary, Orchard Dale Water District. Telephone conversation. April 11, 1991.
- 22. Peters, Belinda, ICF Technology, Inc., and Frey, Jim, La Habra Heights County Water District. Telephone conversation. April 11, 1991.
- 23. Peters, Belinda, ICF Technology, Inc., and Oblasney, Bill, City of Pico Rivera Water Department. Telephone conversation. April 10, 1991.
- 24. Jensen, Gary, ICF Technology, Inc., and Sinclair, Tom, South Montebello Irrigation District. Telephone conversation. April 12, 1991.
- 25. Jensen, Gary, ICF Technology, Inc., and Dermody, Joe, Pico Rivera Water District. Telephone conversation. April 12, 1991.
- 26. Jensen, Gary, ICF Technology, Inc., and Hughes, Ron, City of Santa Fe Springs Water Department. Telephone conversation. April 12, 1991.
- 27. Jensen, Gary, ICF Technology, Inc., and Zandvliet, Eric, City of Downey Water Department. Telephone conversation. April 15, 1991.
- 28. Zandvliet, Eric, City of Downey Water Department to Jensen, Gary, ICF Technology, Inc. Letter. April 19, 1991.
- 29. Jensen, Gary, ICF Technology, Inc., and Lu, Alice, Southern California Water Company. Telephone conversation. May 13, 1991.
- 30. Jensen, Gary, ICF Technology, Inc. and McKenna, Don, City of Whittier Water Department. Telephone conversation. April 9, 1991.

- 31. California Department of Fish and Game. Natural Diversity Database, Rarefinds: Whittier, South Gate, and El Monte Quadrangles. April 1, 1989.
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- 33. U.S. Department of Commerce, NOAA, National Weather Service. <u>NOAA Atlas II, Precipitation-Frequency Atlas of the Western United States</u>. Volume XI-California, pg. 61. Silver Spring, MD. 1973.
- 34. U.S. Environmental Protection Agency, Office of Toxic Substances. Graphic Exposure Modelling System (GEMS). March 1989.
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- 36. Parsons, Brad, California Department of Health Services to Feeley, Mike, U.S. Environmental Protection Agency. Letter. September 24, 1987.
- 37. Jensen, Gary, ICF Technology, Inc., and Smith, Debbie, California Regional Water Quality Control Board. Telephone conversation. March 15, 1991.
- 38. Jensen, Gary, ICF Technology, Inc., and Laguerta, Nestor, California Department of Health Services. Telephone conversation. July 29, 1991.
- 39. Whittier Plating Company, Uniform Hazardous Waste Manifest. February 13, 1991.

APPENDIX A

Contact Log

and

Contact Reports

PA/SI Contact Log

Facility Name: Whittier Plating Facility ID: CAD008495129

| Name | Affiliation | Phone # | Date | Information |
|---------------|---|----------------|----------|--|
| Satish Gulati | California Department of Health Services | (818) 567-3000 | 01/31/91 | DHS has file information on Whittier Plating. |
| John Lewis | California Regional Water Quality Control Board | (213) 266-7552 | 01/31/91 | RWQCB does not have any file information on Whittier Plating. |
| Stan Brown | U.S. Environmental Protection Agency | (415) 744-2098 | 02/01/91 | There has not been a withdrawal of the facility's part A permit. |
| Rob Weinke | Los Angeles Sanitation District | (213) 923-0711 | 02/06/91 | Whittier Plating has not received any discharge violations since 1989. Mr. Weinke will send copies of his file. |
| Rob Ketcham | South Coast Air Quality Management District | (818) 572-6200 | 02/13/91 | Whittier Plating has not violated its air discharge permit. No other information about the site could be given over the phone. |
| Patrick Moore | City of Santa Fe Springs Department of Public Works | (213) 868-0511 | 03/13/91 | See Contact Report |
| Debbie Smith | California Regional Water Quality Control Board | (213) 266-7500 | 03/15/91 | Water from the San Gabriel River is not used for drinking water, industrial, or irrigation purposes South of Whittier Narrows |
| Dan McKenna | City of Whittier Water Department | (213) 685-5214 | 04/9/91 | The City of Whittier Water Department's supply is all from groundwater. |

| Gene Shafer | Suburban Water Systems | (213) 918-1231 | 04/10/91 | Suburban Water Systems Well #410 is the only active well. This well provides 10% to 16% of the drinking water supply to approximately 100,000 customers. |
|--------------------|---|----------------|----------|--|
| *Bob McCloud | San Gabriel Valley Water Company | (818) 448-6183 | 04/10/91 | See Contact Report |
| *Gary Lynch | Park Water Company | (213) 923-0711 | 04/10/91 | See Contact Report |
| *Randy Hillman | City of Norwalk Water Department | (213) 929-2677 | 04/10/91 | See Contact Report |
| *Bill Oblasney | City of Pico Rivera Water Department | (213) 801-4415 | 04/10/91 | See Contact Report |
| *Jim Frey | La Habra Heights County Water District | (212) 697-6769 | 04/11/91 | See Contact Report |
| *Gary Draper | Orchard Dale Water District | (213) 941-0114 | 04/11/91 | See Contact Report |
| Ron Hughes | City of Santa Fe Springs Water Department | (213) 868-0511 | 04/12/91 | See Contact Report |
| Joe Dermody | Pico Rivera Water District | (213) 692-3756 | 04/12/91 | See Contact Report |
| Tom Sinclair | South Montebello Irrigation District | (213) 721-4735 | 04/12/91 | See Contact Report |
| Eric Zandvliet | City of Downey Water Department | (213) 869-7331 | 04/15/91 | See Contact Report |
| Alice Lu | Southern California Water Company | (213) 929-2671 | 05/13/91 | Surface water supplies 50% of the drinking water. There are 20 wells which serve the Santa Fe Springs area. There are approximately 9,240 service connections. |
| Nestor Laguerta | California Department of Health Services | (213) 567-3112 | 7/29/91 | Whittier Plating has never been issued an ISD. DHS information indicates that there has been no state action at the site. |

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SITE RECONNAISSANCE INTERVIEW AND OBSERVATIONS REPORT

ICF Technology, Inc.
Field Investigation Team (FIT)
160 Spear Street, Suite 1380
San Francisco, CA 94105
(415) 957-0110

DATE: March 12, 1991

OBSERVATIONS MADE BY: Gary Jensen, ICF Technology Inc. Tim Swillinger, ICF Technology Inc.

FACILITY REPRESENTATIVE(S) and TITLE(S): Simon Molino, President, Whittier Plating Company, Inc. Tony Molino, Whittier Plating Company, Inc.

SITE NAME: Whittier Plating Company, Inc. EPA ID#: CAD008495129

The following information was obtained during the interview:

Whittier Plating Company, Inc., (WP) first began business at the current location in 1964. Prior to that time, the area had been farm land. Mr. Molino is the original owner of both the property and the business. Since it began operating, WP's only operations have been those associated with recycling or restoring used automobile bumpers and polishing wheels. There have never been any changes in its operations since the businesses inception.

WP receives used bumpers from body shops which contract WP to make repairs and restorations. The bumpers are then straightened, either by hand which involves hammering, or by machine. The straightening takes place in the rear section of the main building. The bumper is then ground with a grinder or file to smooth out any kinks left in the bumper. Some metal dust is generated in this area, but all employees who work in this area are required to wear face masks in order to prevent inhalation of the dust and small metal particles from entering their eyes. An air filtration system removes particles from the air in this area of operation. Excess chrome is removed from the bumper by applying a hydrochloric acid solution. The bumper is then rinsed and polished with a hand held electric polisher to obtain a smooth base for the chroming process. Metal dust is also generated in this area, and employees are required to wear masks when polishing.

The bumper is then taken to the plating room where "whiting" (also known as Cal Strip, a detergent) is used to clean and degrease the bumper. Following this process, the bumper is hoisted up and lowered mechanically into a series of tanks beginning with a soap tank containing an industrial (sodium hydroxide) soap. Upon removal from this tank, the bumper

is wiped down by hand with a plater swab (similar to a mop). Employees then place the bumper in a rinse water tank and run a current through the bumper.

The bumper is then placed in a sour dip (5% acid) solution tank. For the last 10 years, WP has formed the solution by combining acid salts with water. Prior to that time, WP had formed the solution by combining water and sulfuric acid. The bumper is rinsed after being treated with the sour dip.

The bumper is then submerged in a nickel plating solution for 40 to 45 minutes. A high amperage, low voltage current is run through the bumper in order to activate the nickel in solution. By this process the bumper is plated with a nickel layer. The bumper is then hoisted out of the plating tank and rinsed with water just above the plating tank so that the rinsewater falls back into the plating tank. The bumper is rinsed a second time with clear water before it is lowered into the chrome solution tank. The bumper is lowered into the chroming tank for approximately 1.5 minutes. The bumper is rinsed in the same manner as it is after the nickel plating process and is then taken off-line and placed on a rack, ready for delivery.

Solutions in the plating tanks are not drained. Water and metals are added when necessary to the plating solutions in the tanks. Rinsewaters generated during the intermittent rinsing processes are discharged to a clarifier which removes the metals from the rinsewaters before discharge to the public sewer system. There have been no recent discharge violations issued to WP, however one was issued by the Los Angeles Count Sanitation District (LACSD) for exceeding discharge levels in February or April of 1989. Plating water which had been removed from the plating tanks and contained in 55-gallon drums for a period of time, had been poured into the clarifier immediately prior to a random sampling of the clarifier effluent by the LACSD. This was presumably the cause for the high levels of metals contained in the clarifier effluent. Preceding and subsequent sample analysis of the effluent indicated the levels of metals contained in the effluent to be below the discharge limits.

LACSD samples the clarifier effluent once every 3 months and also conducts random sampling. WP collects its own samples once every three months and sends them to Western Analytical Laboratories for analysis. WP cleans out the sludge which collects in the clarifier once every three weeks (a volume of approximately 40 gallons) and places them in drier ovens to dry. The sludge dries into a cake which is put in barrels and hauled off by Norwalk Drum. Approximately 11,000 to 12,000 gallons of rinsewater is put through the clarifier each day. There has been no sampling of groundwater or soils at the WP facility. Dust generated at the facility by grinding and polishing is collected by an air filter (vacuum) system, put in barrels, and hauled by Norwalk Drum 3 to 4 times per year. Doors in the facility are open at the time that dust is generated in order to provide a source of clean air for the vacuum system. Residual dust which settles on the floor at WP is swept up every day at the close of business and placed in barrels which are hauled by Norwalk Drum.

WP purchases approximately 2,000 pounds of nickel and 500 to 600 pounds of chromium annually. The nickel is delivered in 550 pound cans and the chromium in 100 pound cans.

Mr. Molino requested that a copy of the FIT report be sent to him.

The following observations were made during the site reconnaissance visit:

The site is bordered to the north by Crow Company and to the south by Forging & Die and on the east by Pike Street. The facility consists of a large warehouse, a storage yard, and a series of sheds. The warehouse contains the administration office, stacks of bumpers, and the plating area. The plating area consisted of a series of 8 tanks approximately 12 feet by 4 feet by 2 feet (varying from 800 to 1,200 gallons each) and a hoist unit used to lower and raise the bumpers into and out of each tank. The warehouse has an air vacuum system to remove dust from the air in the grinder area. During the site tour, it was noted that the rear door to the warehouse was open, allowing outside air to enter the grinder area. This ventilation scheme reportedly provided clean air to the grinder area while dust-laden air was sucked into the air filtration system. In back of the warehouse were a storage yard and a couple of sheds. The storage yard housed old, used automobile bumpers and wheels. The sheds housed a filing area, bumper straightening area, and a hydrochloric acid tank. The entire site is paved.

In an area immediately to the rear of the warehouse were three drums labelled "hazardous waste". One of these drums was uncovered and dried clarifier sludge was visible. Another drum of hazardous material called "Cal Strip" was located in this area too. A below-grade clarifier was located on the southeastern side of the warehouse. This area is fenced off from the adjacent property and access is limited by a locked gate. The clarifier was covered by a metal lid.

Agency/Affiliation:

City of Santa Fe Springs

Department/Region:

Public Works

Address/City:

11710 East Telegraph Rd.

County/State/Zip:

Los Angeles, California 90670

| Contact | Title | Phone |
|---------------|------------|----------------|
| Patrick Moore | Eng. Tech. | (213) 868-0511 |

ICF Person Making Contact: Gary Jensen Date: March 13, 1991

Subject: Flood Plain Information

Site Name: Whittier Plating Company EPA ID#: CAD008495129

Whittier Plating company is located in an area of minimal flooding, or less frequently than a 500 year flood plain. The information was obtained from panel 0601580001B, April 15, 1980.

Agency/Affiliation:

San Gabriel Valley Water Company (SGVWC)

Department/Region:

Whittier Branch

Address/City:

P.O. Box 6010, El Monte

County/State/Zip:

Los Angeles County, California 91734

| Contact | Title | Phone |
|-------------|-------|----------------|
| Bob McCloud | | (818) 448-6183 |

ICF Person Making Contact: Belinda Peters Date: April 10, 1991

Subject: Groundwater/drinking water supply information

Site Name:

Whittier Plating Company (From United EPA ID#: CAD008495129

States Printing Ink Corporation)

The Whittier district of SGVWC serves areas within 4 miles of Santa Fe Springs. This district is supplied by 100% groundwater. Seventy-four hundred service connections of approximately 24,400 residents are served by 3 active wells within this system.

Well A: 6135 Pioneer Avenue, Whittier/2,200 gpm/462 feet deep, screened at 205-318', 336-416', 434-444', and 457-462' bgs.

Well B: 6135 Pioneer Avenue, Whittier/3,500 gpm/552 feet deep, screened at 170-520' bgs.

Well C: 10,509 Dunlap Crossing, Whittier/3,700 gpm/552 feet deep, screened at 180-542' bgs.

There are also 2 inactive wells, one at each location. These wells were closed due to low production.

| Agency/Affiliation: | Park Water C | ompany (PWC) | | |
|---|-----------------|--------------------------|------------------------|--|
| Department/Region: | | | | |
| Address/City: | P.O. Box 7002 | 2, Downey | | |
| County/State/Zip: | Los Angeles C | County, California 90241 | | |
| Contact Title Phone | | | | |
| Gary Lynch | | | (213) 923-0711 | |
| ICF Person Making Contact: Belinda Peters | | eters Date: | April 10, 1991 | |
| | | | | |
| Subject: Groundwater/dr | inking water su | apply information | | |
| Site Name: Whittier F | • | y (From United EPA ID | #: <u>CAD008495129</u> | |

In the Norwalk/Bellflower system of PWC, drinking water supply is made up of 80 percent water purchased from Metropolitan Water District, and 20 percent groundwater. PWC has 9 active wells and 10 standby wells which are used less than once a year. Approximately 57,000 residents are served by this supply.

Agency/Affiliation:

City of Norwalk

Department/Region:

Water Department

Address/City:

12700 Norwalk Boulevard, Norwalk

County/State/Zip:

Los Angeles County, California 90651

| Contact | Title | Phone |
|---------------|-------|----------------|
| Randy Hillman | | (213) 929-2677 |

ICF Person Making Contact: Belinda Peters Date: April 10, 1991

Subject: Groundwater/drinking water supply information

Site Name:

Whittier Plating Company (From United EPA ID#: CAD008495129

States Plating Company)

The City of Norwalk serves 3,500 service connections, approximately 11,600 residents. drinking water supply consists of 80 percent groundwater and 20 percent surface water purchased from the City of Santa Fe Springs. NWD operates 4 wells:

Well #3: 11352 Lakeland/550 gpm/screened at 225-232', 243-251', 281-291', and 564-581' bgs.

Well #4: 11314 Leffingwell/801 gpm/screened at 416-441' bgs.

Well #5: 14477 Taddy/783 gpm/screened at 361-367',399-409', and 566-587' bgs.

Well #8: 13619 San Antonio/676 gpm/screened at 333-341', 498-509', 602-613', 624-635', and 872-877' bgs.

NWD has no stand-by wells and 2 wells were closed 10 years ago due to low production.

Agency/Affiliation:

City of Pico Rivera (PRWD)

Department/Region: Water Department

Address/City:

6615 Passons Avenue, Pico Rivera

County/State/Zip:

Los Angeles County, California 90660

| Contact | Title | Phone |
|---------------|-------|----------------|
| Bill Oblasney | | (213) 801-4415 |

ICF Person Making Contact: Belinda Peters Date: April 10, 1991

Subject: Groundwater/drinking water supply information

Site Name:

Whittier Plating Company (From United EPA ID#: CAD008495129

States Printing Ink Corporation)

The drinking water supplied by PRWD is 100 percent groundwater. There are 10 active wells and 2 inactive wells in the system. One inactive well is currently undergoing extensive repair and the second was closed due to a problem with sand. PRWD serves water to 9,000 service connections, approximately 29,700 residents.

Well #1: 8739 Gallatin Road/2,800 gpm

Well #2: 8739 Gallatin Road/2,500 gpm

Well #3: 8316 Washington/3,000 gpm

Well #4: 8316 Washington/2,050 gpm

Well #5: 8305 Slauson/1,500 gpm

Well #6: 8231 Elmont/650 gpm

Well #7: 8523 Ceylon/800 gpm

Well #8: 9623 Telegraph/500 gpm

Well #9: 9732 Lundahl/3,000 gpm

Well #10: 9732 Lundahl/2,200 gpm

| *************************************** | | | | |
|--|--------------|-----------------------------|---------------|----------------|
| Agency/Affiliation: | La Habra He | ights County Water District | | |
| Department/Region: | | | | |
| Address/City: | 1271 Haciend | a Boulevard, La Habra He | ights | |
| County/State/Zip: Los Angeles County, California 90631 | | | | |
| Contact Title Phone | | | | |
| Jim Frey | | | | (213) 697-6769 |
| ICF Person Making Contact: Belinda Peters Date: April 11, 1991 | | | pril 11, 1991 | |
| Subject: Groundwater/drinking water supply information | | | | |
| Site Name: Whittier Plating Company (From United EPA ID#: CAD008495129 States Printing Ink Corporation) | | | | |
| - | | | | |

LHHCWD combines 10 percent imported water from Metropolitan Water District with 90 percent groundwater pumped from 4 wells. All 4 wells are located at 10550 Dunlap Crossing Road in Whittier. LHHCWD maintains 1 stand-by well with no pump which hasn't been used in more than 12 years.

Well #2: 725 gpm/perforated at 75-95', and 230-305' bgs.

Well #5: 896 gpm/perforated at 75-85', 200-212', 245-289', 548-580', and 600-611' bgs.

Well #8: 1,300 gpm/perforated at 120-121', 175-185', 199-212', 224-258', 265-285', 216-322', 345-376', 455-460', 550-572', 578-592', and 616-625' bgs.

Well #9: 1,649 gpm/perforated at 184-188', 200-211', 261-294', 350-382', 457-463', 630-635', 645-654', and 670-698' bgs.

Well #8 is currently undergoing repair and will go back on line in May 1991. The population served by the system is approximately 6,000 residents.

| Agency/Affiliation: | Orchard Dale | Water District (ODWD) | | |
|--|--|---------------------------------------|---------------|----------------|
| Department/Region: | | · · · · · · · · · · · · · · · · · · · | | |
| Address/City: | 13819 Telegraph Road, Santa Fe Springs | | | |
| County/State/Zip: | Los Angeles County, California 90604 | | | |
| Contact Title Phone | | | | |
| Gary Draper | | | | (213) 941-0114 |
| ICF Person Making Contact: Belinda Peters Date: A Subject: Groundwater/drinking water supply information | | Date: A | pril 11, 1991 | |
| Site Name: Whittier Plating Company (From United EPA ID#: CAD00849512 States Printing Ink Corporation | | CAD008495129 | | |
| | nung ink Corpo | oration | | |

ODWD operates no groundwater wells. They obtain 60 percent of their water from Metropolitan Water District and they purchase the remaining 40 percent from the La Habra Heights County Water District. The ODWD supply serves approximately 15,000 to 17,000 residents in a 2 square mile area.

Agency/Affiliation:

City of Santa Fe Springs

Department/Region:

Water Department

Address/City:

11710 Telegraph Rd., Santa Fe Springs

County/State/Zip:

Los Angeles County, CA 90670

| Contact | Title | Phone |
|------------|-------|----------------|
| Ron Hughes | | (213) 868-0511 |

ICF Person Making Contact: Gary Jensen Date: April 12, 1991

Subject: Groundwater Information

Site Name:

Whittier Platting Company

EPA ID#: CAD008495129

Well #1 is the closest city of Santa Fe Springs well to the Whittier Plating site. The well is approximately 984 feet deep. It is perforated at several depths, the shallowest at 273 feet below ground surface (bgs).

The well log for well #1 indicates the following soils stratigraphy.

0 to 13 ft. bgs - sand and gravel

13 to 75 ft. bgs - clay

75 to 108 ft. bgs - sand and gravel

108 to 121 ft. bgs - clay

121 to 143 ft. bgs - sand

143 to 173 ft. bgs - clay

173 to 193 ft. bgs - sand & gravel

193 to 273 ft. bgs - clay

There are 3 active wells in the system which provide approximately 45% of the drinking water. Approximately 11,000 residents are served by the system, and during the day the business population reaches approximately 100,000.

| CONTE | DED | ODT |
|-------|-----|------|
| CONTA | KEP | UKI. |

| | | - | | | | | |
|---|-----------------|-----------------------------------|----------------|--|--|--|--|
| Agency/Affiliation: | Pico Rivera W | Vater District (PRWD) | | | | | |
| Department/Region: | | | | | | | |
| Address/City: | 4843 South Cl | hurch St. Pico Rivera | | | | | |
| County/State/Zip: | Los Angeles (| County, CA 90660 | | | | | |
| Contact Title Phone | | | | | | | |
| | 1 | | | | | | |
| Joe Dermod | у | Field Superintendent | (213) 697-3756 | | | | |
| Joe Dermod | · | Field Superintendent | | | | | |
| | tact: Gary Jens | Field Superintendent sen Date: A | (213) 697-3756 | | | | |
| ICF Person Making Con- Subject: Groundwater/D | tact: Gary Jens | Field Superintendent Sen Date: A | (213) 697-3756 | | | | |

PRWD obtains all its water from 6 active groundwater wells. PRWD serves approximately 5,200 service connections which correspond to a population of approximately 17,600. The wells are located at the following addresses:

#2 4852 S. Church St.

#4A 9512 Bragher

#5A 6708 Rosemead Blvd.

#7 9036 Arma

#8 5514 Paramount Blvd.

#9A 4823 Lexington

All wells are located in Pico Rivera.

| Agency/Affiliation: South Montebello Irrigation District (SMID) | | | | | | | |
|---|--|---------------------------------------|----------------|--|--|--|--|
| Department/Region: | | | | | | | |
| Address/City: | 864 West Was | 864 West Washington Blvd., Montebello | | | | | |
| County/State/Zip: | County/State/Zip: Los Angeles County, California 90640 | | | | | | |
| Contact Title Phone | | | | | | | |
| Tom Sincla | ir | General Manager | (213) 721-4735 | | | | |
| ICF Person Making Contact: Gary Jensen Date: 04/12/91 Subject: Groundwater/drinking water supply information | | | | | | | |
| Site Name: Whittier Plating Company EPA ID#: CAD008495129 | | | | | | | |
| SMID obtains all its groundwater from 3 active wells located in Rio Hondo. Each well supplies approximately equal portions of the total supply to approximately 12, 000 to 13,000 people. | | | | | | | |

| CONT | 'A | CT | REP | ORT |
|--------|----|----|-----|-----|
| \sim | | | | |

| y of Down | ey Water Department | | | | |
|---|--------------------------|---|--|--|--|
| | | | | | |
| 11 Brook | kshire Ave. Downey CA | | | | |
| Angeles (| County, California 90241 | <u>, , , , , , , , , , , , , , , , , , , </u> | | | |
| | Title | Phone | | | |
| ContactTitlePhoneEric ZandvlietWater Engineer(213) 869-7331 | | | | | |
| ICF Person Making Contact: Gary Jensen Date: April 15, 1991 | | | | | |
| - | sen Date: A | · · · · · · · · · · · · · · · · · · · | | | |
| - | <u> </u> | · · · · · · · · · · · · · · · · · · · | | | |
| - | nen Date: A | · · · · · · · · · · · · · · · · · · · | | | |
| <u> </u> | 111 Brool | s Angeles County, California 90241 Title | | | |

There are 5 active wells which supply 70% of Downey's drinking water to approximately 91,444 people Mr. Zandvliet will send a map indicating the locations of the wells.

APPENDIX B

Photographic Documentation

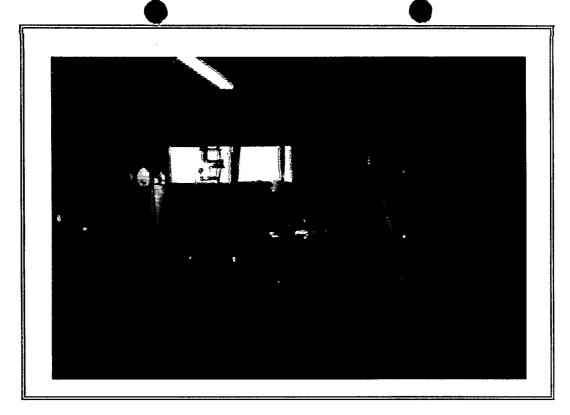


Photo 1: Bumper straightening area. View faces west.

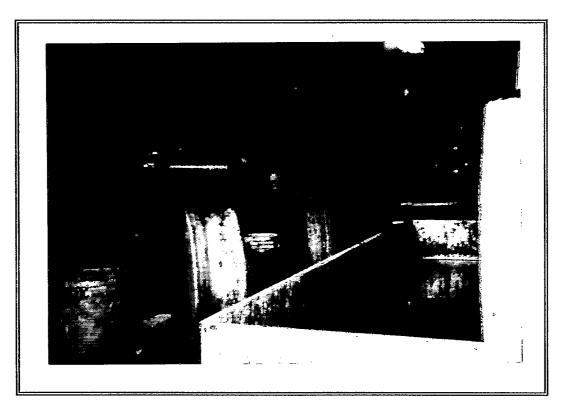


Photo 2: Muratic acid tank located in the shed immediately to the rear of the main warehouse. View faces southeast.

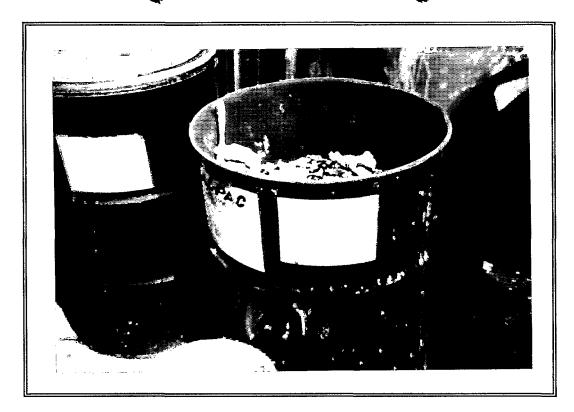


Photo 3: Open drum containing sludge collected from the clarifier. View faces east.



Photo 4: Drum of unused Cal Strip located behind the warehouse.

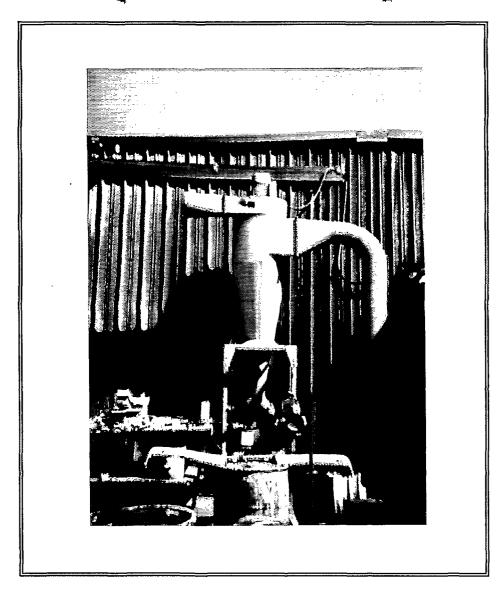


Photo 5: Air filter system as seen from the west side of the warehouse. View faces east.

APPENDIX C

| Water Purveyor Information | | | | | | | | | |
|--|--|---------|-------|-----|-----|-----|--------------------------|----|--------------------------------------|
| Water Purveyor | Number of Wells Within Specified Distance Ring (miles) | | | | | | Total Wells In System | | Total Population Served by System |
| | 0-1/4 | 1/4-1/2 | 1/2-1 | 1-2 | 2-3 | 3-4 | tana aya | | |
| City of Norwalk | | | | 1 | | 3 | 4 | 20 | 11,600 |
| Park Water Company | | | | | | 3 | 9 | 80 | 57,000 |
| Suburban Water System | | | | | | 1 | 1 | 84 | 100,000 |
| San Gabriel Valley Water Co. | | | | 1 | | 2 | 3 | 0 | 24,400 |
| La Habra Heights County Water Dist. | | | | | | 4 | 4 | 10 | 12,800* |
| City of Pico Rivera | | | | 4 | 4 | | 10 | 0 | 29,700 |
| South Montebello Irrigation Dist. | | | | | | 3 | 3 | 0 | 13,000 |
| Pico Rivera Water Dist. | | | | , | 2 | 4 | 6 | 0 | 17,600 |
| City of Santa Fe Springs | | | 1 | 1 | | | 3 | 55 | 13,320** |
| City of Downey | | | | 2 | 7 | 5 | 20 | 10 | 91,444 |
| City of Whittier | | | | | | 1 | 3 | 0 | 44,000 |
| Southern California Water Co. | | | | 1 | 5 | 4 | 20 | 50 | 36,960*** |

^{*} This population includes 40% of the population of the Orchard Dale Water District, (ODWD) since ODWD receives 40% of its drinking water from La Habra Heights County Water District. 40% of 17,000 = 6,800. (Peters, Belinda, ICF Technology, Inc. and Draper, Gary Orchard Dale Water District. Telephone conversation. April 11, 1991; and Peters, Belinda, ICF Technology Inc. and Frey, Jim, La Habra Heights County Water District. Telephone conversation. April 11, 1991.)

^{**} This figure includes 20% of the population of the City of Norwalk Water District.
(California Department of Water Resources, Souther District. Watermaster Service Central Basin Los Angeles County. July 1, 1988 to June 30, 1989; and Jensen, Gary, ICF Technology Inc. and Hughes, Ron, City of Santa Fe Springs Water Department. Telephone conversation. April 12, 1991.)

^{***} This population figure estimates 4 people served by each service connection (Jensen, Gary ICF Technology, Inc. and Lu, Alice, Southern California Water Company. Telephone conversation. May 13, 1991; and California Department of Water Resources. Watermaster Service Central Basin Los Angeles County. July 1, 1988 to June 30, 1989.)